

Framework for Effective Board Governance of Health System Quality

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For more than 25 years, the Institute for Healthcare Improvement (IHI) has used improvement science to advance and sustain better outcomes in health and health systems across the world. We bring awareness of safety and quality to millions, accelerate learning and the systematic improvement of care, develop solutions to previously intractable challenges, and mobilize health systems, communities, regions, and nations to reduce harm and deaths. We work in collaboration with the growing IHI community to spark bold, inventive ways to improve the health of individuals and populations. We generate optimism, harvest fresh ideas, and support anyone, anywhere who wants to profoundly change health and health care for the better.

The ideas and findings in these white papers represent innovative work by IHI and organizations with whom we collaborate. Our white papers are designed to share the problems IHI is working to address, the ideas we are developing and testing to help organizations make breakthrough improvements, and early results where they exist.

Contents

| | |
|---|----|
| Executive Summary | 4 |
| Background | 5 |
| Framework for Governance of Health System Quality | 9 |
| Governance of Quality Assessment: A Roadmap for Board Oversight of Health System Quality | 12 |
| Governance of Quality Assessment (GQA) Tool | 14 |
| Using GQA Results to Plan Next Steps | 21 |
| Conclusion | 22 |
| Appendix A: Support Guides | 23 |
| Appendix B: IHI Lucian Leape Institute Expert Meeting Attendees | 31 |
| Appendix C: Members of the IHI Lucian Leape Institute | 33 |
| References | 34 |

Executive Summary

The Institute of Medicine (IOM) reports *To Err Is Human* and *Crossing the Quality Chasm* prompted health care leaders to address the patient safety crisis and advance the systems, teamwork, and improvement science needed to deliver safer care to patients.^{1,2} Following the IOM reports, research on health care governance practices identified a correlation between health system board prioritization of quality oversight and higher performance on key quality indicators.^{3,4,5,6,7} Quality oversight by a board has been shown to correlate with patient outcomes on key quality metrics, and boards that prioritize quality support a leadership commitment to quality and the incentives and oversight to achieve the quality care that patients deserve.

Two main evolutions have made governing quality more complex for trustees and the health system leaders who support them:

- The definition of “quality” has evolved and expanded over the last decade, from a singular focus on safety to an expanded focus on all six dimensions of quality as identified in the *Crossing the Quality Chasm* report.
- The expansion of health systems beyond hospital walls and the addition of population health oversight have created complexity both in terms of *what* to govern to support high-quality care and *how* to oversee quality outside of the traditional hospital setting and across the health care continuum.

Many health system leaders have worked to ensure that their trustees are sufficiently prepared to oversee quality, but the two factors noted above have increased the need for board education and the time commitment for trustees and the health system senior leaders who support them. Therefore, there is a need for a clear, actionable framework for better governance of quality across all dimensions, including identification of the core processes and necessary activities for effective governance of quality.

Ultimately, the most valuable resource of a board is time — both in terms of how much time they allocate and how they use it — to engage in oversight of the various areas of governance. To help health system leaders and boards use their governance time most effectively, this white paper includes three components:

- **Framework for Governance of Health System Quality:** A clear, actionable framework for oversight of all the dimensions of quality;
- **Governance of Quality Assessment:** A tool for trustees and health system leaders to evaluate and score current quality oversight processes and assess progress in improving board quality oversight over time; and
- **Three Support Guides:** Three central knowledge area support guides for governance of quality (Core Quality Knowledge, Core Improvement System Knowledge, and Board Culture and Commitment to Quality), which health system leaders and governance educators can use to advance their education for trustees.

The framework, assessment tool, and support guides aim to reduce variation in and clarify trustee responsibilities for quality oversight, and also serve as practical tools for trustees and the health system leaders who support them to govern quality in a way that will deliver better care to patients and communities.

Background

Research on health care governance practices has identified a correlation between health system board prioritization of quality oversight and higher performance on key quality indicators.^{8,9,10,11,12} However, guidance and practices for board oversight of the dimensions of quality beyond safety are highly variable across health systems. Health system leaders and trustees are looking for greater depth and clarity on what they should do to fulfill their oversight of quality. Governance of quality is a long-overlooked and underutilized lever to deliver better care across all the dimensions of quality.

What to Govern as Quality: Expanding from Safety to STEEEP

The IOM report *Crossing the Quality Chasm* established six aims for improvement, a framework for health care quality in the US: care that is safe, timely, effective, efficient, equitable, and patient centered (STEEEP).¹³ Safety is an essential component of quality, and health leaders have become more consistent in the governance of the elements of safety (though many health systems still do not dedicate enough time to quality or are quick to push it to the bottom of the agenda).

Yet governance of the other STEEEP dimensions of quality beyond safety is significantly more variable, providing an opportunity for greater clarity and calibration across the health care organizations and leaders that guide governance of quality. Health system leaders and trustees struggle with whether to govern a narrow definition of quality, driven by metrics defined by the Centers for Medicare & Medicaid Services (CMS) or national oversight organizations, versus governing quality's broader dimensions as put forth in the IOM STEEEP framework.

What to Govern as Quality: Expansion and Complexity of Health Systems

Health care leaders now look beyond the hospital walls to the entire system of care and to social and community factors that impact health outcomes. Thus, health system quality has expanded to include improving the health of communities and reducing the cost of health care and the financial burden facing patients. As health care is increasingly delivered in a range of settings beyond the hospital, from outpatient clinics to the home, leaders and trustees are challenged to define and govern quality in these settings.

The nationwide shift in US health care from standalone and community hospitals to larger, integrated care delivery systems has further increased the knowledge required for trustees to fulfill their fiduciary responsibility of governing quality. Finally, by tying revenue to quality performance, many payment models now add executive financial incentives to governance of quality. Health leaders have struggled to frame governance of quality in the context of the expansion and complexity of both single institutions and health systems.

Call to Action

In the 2017 report, *Leading a Culture of Safety: A Blueprint for Success*, board development and engagement was highlighted as one of the “six leadership domains that require CEO focus and dedication to develop and sustain a culture of safety.”¹⁴ According to the report, “The board is responsible for making sure the correct oversight is in place, that quality and safety data are

systematically reviewed, and that safety receives appropriate attention as a standing agenda item at all meetings.”

Building on this report, the Institute for Healthcare Improvement (IHI) Lucian Leape Institute identified a need for greater understanding of the current state of governance of quality, education on quality for health system trustees, along with the potential need for guidance and tools to support governance oversight of quality. The IHI Lucian Leape Institute understood the importance of developing this forward-thinking and cutting-edge content collaboratively with leading governance organizations and making it available as a public good for all health systems to access and incorporate in a way that would be most helpful to them.

Assessment of Current Governance Practices and Education

To evaluate the current state of board governance of quality, IHI employed its 90-day innovation process.¹⁵ This work included the following:

- **A landscape scan** to understand the current state of governance education offerings and challenges in quality, drawing on national and state trustee education programs. This scan included more than 50 interviews with governance experts, health system leaders, and trustees; and a review of available trustee guides and assessments for governance of quality.
- **A scan of existing peer-reviewed research** on board quality governance practices and the link between board practices and quality outcomes for health systems.
- **An expert meeting** (see Appendix B) attended by health care and governance experts. The meeting provided critical insights and guidance for the work, including the development of a framework for effective governance of health system quality. This group of thought leaders included representatives from the American Hospital Association (AHA), the American College of Healthcare Executives (ACHE), The Governance Institute, leading state hospital associations, health system CEOs and trustees, and national governance and health care quality experts.

Research and Landscape Scan Highlights

(Note: An in-depth assessment of the current state of board governance of quality and trustee education in support of quality is available in the companion document to this white paper, *Research Summary: Effective Board Governance of Health System Quality*.¹⁶)

The IHI Lucian Leape Institute’s research scan, evaluation of governance education in quality, and expert interviews indicated that most trustee education on governance of quality focuses primarily on safety, meaning that such education often does not prepare trustees for governing the other dimensions of quality as defined by the STEEP framework and the IHI Triple Aim,¹⁷ which also considers population health and health care cost. In the boardroom, quality is often a lower priority than financial oversight. Epstein and Jha found that “quality performance was on the agenda at every board meeting in 63 percent of US hospitals, and financial performance was always on the agenda in 93 percent of hospitals.”¹⁸

Our interviews indicated that the financial and cultural implications of poor quality of care are not often formally considered, noting a difference between putting quality on a board meeting agenda and having a dedicated discussion about quality. Many trustees, while motivated to ensure high-quality care, lack a clear understanding of the necessary activities for effective quality oversight

(the “what” and “how” of their governance work); IHI’s research identified the need for more direction on the core processes for governance of quality.¹⁹ Some trustees noted that they were at the mercy of the quality data and information presented to them by their organization’s leadership team; they lacked ways of confirming that their quality work was aligned with work at other leading health care organizations and industry best practice.

Health care leaders observed that the many guides and assessments they referenced often had varying recommendations for core governance activities on quality, especially for dimensions of quality beyond safety. We analyzed the available board guides or tools for board members and hospital leaders to evaluate their quality governance activities. The review of existing assessments from national and state governance support organizations identified that many focus on board prioritization of quality in terms of time spent and trustee “commitment” to governance based on a trustee self-assessment. Many assessments offer specific recommendations for key processes to oversee safety, such as reviewing serious events and key safety metrics in a dashboard. However, most assessments offer more variable guidance on the core processes to govern the STEEEP dimensions of quality beyond safety, quality outside of the hospital setting, and overall health in the communities the health systems serve.

With so many assessments and guidance recommending different processes and activities, it is not surprising that those who support trustees struggle to clearly define the core work of board quality oversight. Trustees and health care leaders alike identified a need for a simple framework that sets forth the activities that boards need to perform in their oversight of quality and for calibration across governance support organizations to support a simple, consistent framework.

Barriers to Governance of Quality

The IHI research team sought to understand and identify ways to address the many barriers to governance of quality identified in interviews and the published literature. The most common barrier identified was trustees’ available time to contribute to a volunteer board. Often, health care leaders and trustees identified that expectations for trustee engagement on quality issues are not presented with the same clarity and priority as financial and philanthropic expectations for governance. Many interviewees noted that trustees are less confident in the governance of quality because of its clinical nature, which, in many cases, necessitates learning new terminology and absorbing concepts unfamiliar to trustees without a clinical background.

Many trustees and health care leaders we interviewed identified the CEO as the “gatekeeper” for the board, stewarding access to external resources and guidelines related to the board’s role in health care quality, often not wanting to overwhelm or burden the trustees, given the demands on their time. However, even when the trustees and health care leaders interviewed indicated that they did have dedicated time and commitment to quality, they were not clear as to whether the specific set of processes or activities they currently had in place were the best ones for effective governance of quality.

Based on insights from IHI’s research, landscape scan of current guidance on quality oversight, and extensive interviews, a new framework for governance of quality was created through a collaborative effort of thought leaders and health system leaders to provide clarity, support, and reduced variation in what boards should consider for their oversight of quality. The framework identifies the foundational knowledge of core quality concepts and the need to understand the systems for quality control and improvement used in health systems. The framework also recognizes that board culture and commitment to quality are essential.

A new Governance of Quality Assessment identifies the core processes of board governance of quality, providing a tool for boards and health system leaders to calibrate the governance oversight work plan. When these core processes are approached consistently, organizations can advance governance of quality that, based on previously cited studies, will support the health system's performance on quality.

Current State of Board Work and Education in Health System Quality

- **Governance of quality is primarily focused on safety.**

Board education in quality is available but inconsistently accessed by trustees; education focuses primarily on safety, with variable exposure to other dimensions of quality.

- **Governance of quality is hospital-centric, with limited focus on population or community health.**

Most board education emphasizes in-hospital quality; it does not guide boards in oversight of care in other health system settings or in the health of the community.

- **Core processes for governance of quality core are variable.**

Board quality educational support offerings tend to emphasize general engagement in the form of time, structure, and leadership commitment to quality governance; they focus less on the specific activities (especially beyond safety) and core processes trustees need to employ to oversee quality.

- **A clear, consistent framework for governance of health system quality is needed.**

Utilizing a consistent framework and assessment tool for key board-specific processes for quality oversight will help improve governance of health system quality and deliver on patient and community expectations for quality care.

- **A call to action to raise expectations and improve support for board governance of health system quality is needed.**

A multifaceted approach is needed to break through the barriers to trustee oversight of quality, including a greater call to action, clearer set of core processes with an assessment of that work, and raised expectations for time to govern quality.

Framework for Governance of Health System Quality

Achieving better quality care in health systems requires a complex and multifaceted partnership among health care providers, payers, patients, and caregivers. The IHI Lucian Leape Institute's research scan, evaluation of governance education in quality, and expert interviews made it clear that board members, and those who support them, desire a clear and consistent framework to guide core quality knowledge, expectations, and activities to better govern quality. To help make progress in this area, the IHI Lucian Leape Institute convened leading governance organizations, health industry thought leaders, and trustees (see Appendix B) to collaboratively develop a new comprehensive framework and assessment tool for governance of quality.

The framework and assessment tool are designed with the following considerations:

- **Simplify concepts:** Use simple, trustee-friendly language that defines actionable processes and activities for trustees and those who support them to oversee quality.
- **Incorporate all six STEEP dimensions of quality:** Understand quality as care that is safe, timely, effective, efficient, equitable, and patient centered (STEEP), as defined by the Institute of Medicine.
- **Include community health and value:** Ensure that population health and health care value are critical elements of quality oversight.
- **Govern quality in and out of the hospital setting:** Advance quality governance throughout the health system, not solely in the hospital setting.
- **Advance organizational improvement knowledge:** Support trustees in understanding the ways to evaluate, prioritize, and improve performance on dimensions of quality.
- **Identify the key attributes of a governance culture of quality:** Describe the elements of a board culture and commitment to high-quality, patient-centered, equitable care.

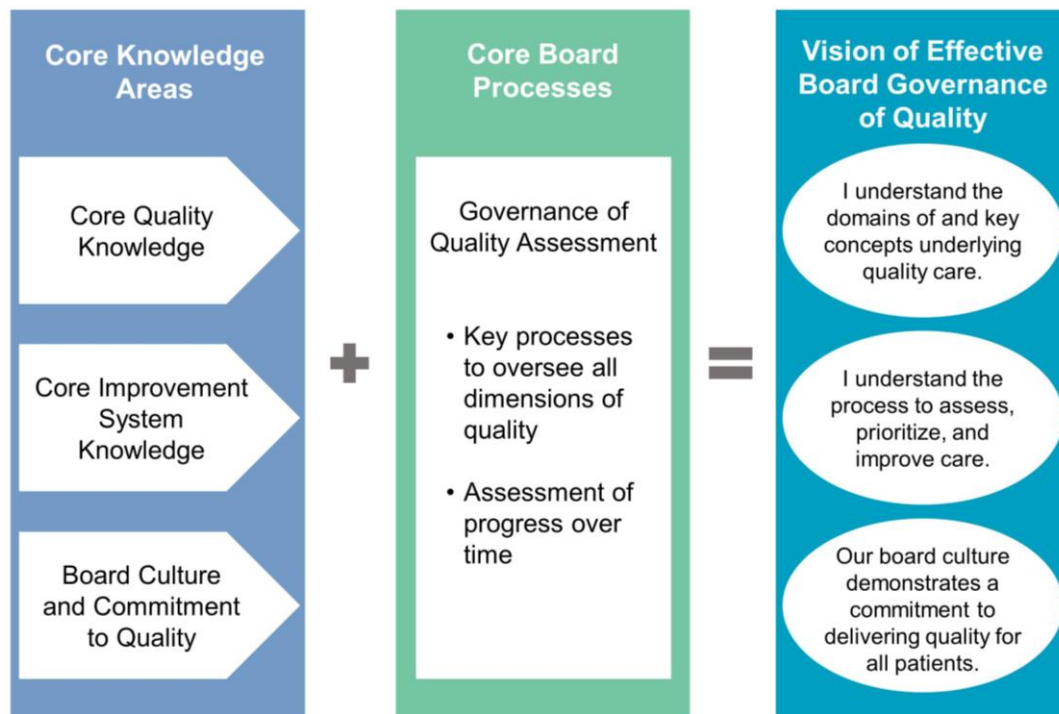
IHI worked with the expert group to establish an aspirational vision for trustees: With the ideal education in and knowledge of quality concepts, every trustee will be able to respond to three statements in the affirmative (see Figure 1).

Figure 1. Vision of Effective Board Governance of Health System Quality



Having established the vision, the expert group proceeded to define the core knowledge and core processes necessary to realize this vision, resulting in the development of a Framework for Governance of Health System Quality (see Figure 2).

Figure 2. Framework for Governance of Health System Quality



At the heart of the framework [CENTER] is the Governance of Quality Assessment (GQA), which outlines the key processes and activities that, if well performed, enable trustees to achieve the vision of effective board governance of quality [RIGHT]. The GQA serves as both a **roadmap of the key processes the board should undertake** to oversee all dimensions of quality, and an **assessment of how well the board is doing** with respect to those processes.

The expert group also identified three core knowledge areas [LEFT] that support the effective execution of the core processes and activities outlined in the GQA: Core Quality Knowledge, Core Improvement System Knowledge, and Board Culture and Commitment to Quality. The expert group's suggestions for core knowledge are assembled into three support guides (see Appendix A).

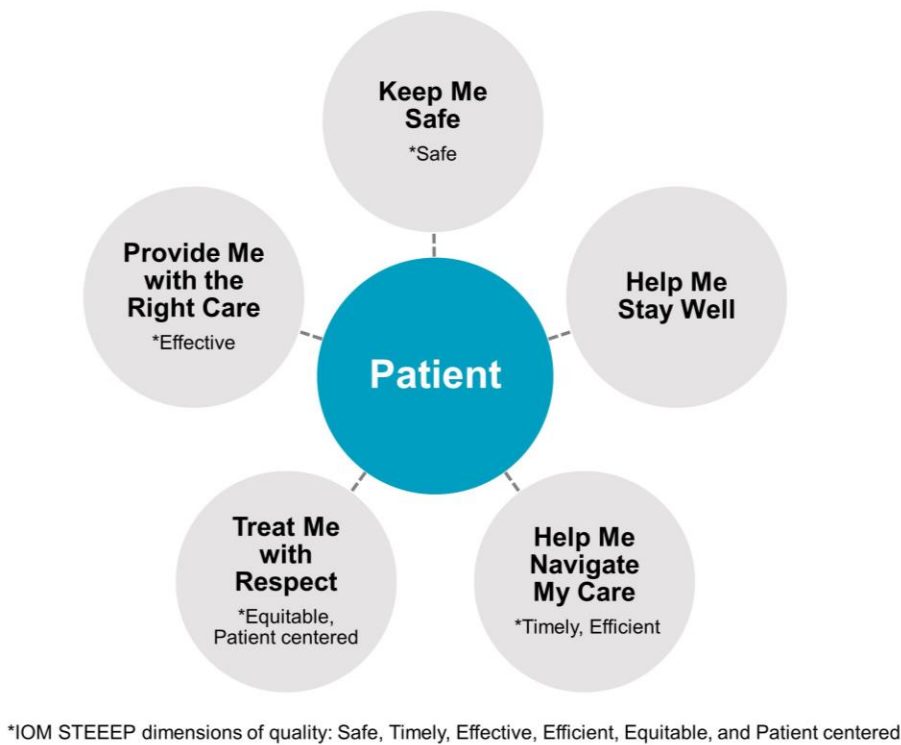
Together, the GQA and the three support guides aim to reduce variation in current governance recommendations and practices and to establish a comprehensive framework for the core knowledge and key activities for fiduciary governance of quality. Health system leadership and governance educators can use these tools to calibrate and advance their educational materials for trustees and develop ongoing education.

Patient-Centered Depiction of Quality

The expert group supported the use of a patient-centered framework, like the one introduced at Nationwide Children’s Hospital in Ohio,²⁰ to display the core components of quality and drive home the direct impact they have on care. There is a compelling case for conveying this information to the board using a patient lens, as trustees may find the patient perspective on quality more motivating and actionable than the STEEEP terminology.

This reframed model also bundles some elements of STEEEP together in a way that represents the patient journey and avoids some of the health care terminology that can be off-putting to trustees. For example, the STEEEP dimensions of timely and efficient care are combined into “Help Me Navigate My Care.” The STEEEP dimensions of equitable and patient-centered care are aggregated into “Treat Me with Respect.” Figure 3 presents a visual representation of the core components of quality from the patient’s perspective, with the patient at the center of the delivery system.

Figure 3. Core Components of Quality from the Patient’s Perspective



The new framework and assessment tool will reveal areas for quality improvement to many CEOs and board members. It will take time for board members and health system leaders to incorporate those additional elements of quality into their agendas and work plans, but the changes will help to better align their quality oversight with patient expectations and the evolution, expansion, and complexity of health care delivery. Maintaining the status quo with regard to quality governance will not best serve patients or health systems, which face increasing complexity of patient-, population-, and community-based care in the coming years.

Governance of Quality Assessment: A Roadmap for Board Oversight of Health System Quality

The Governance of Quality Assessment (GQA) serves as both a **roadmap of the key processes the board should undertake** to oversee all dimensions of quality, and an **assessment of how well the board is doing** with respect to those processes. The GQA employs a set of concrete recommendations for 30 core processes of quality oversight organized into six categories, and provides a high-level assessment of board culture, structure, and commitment. The resulting GQA scores (for each core process, each category, and overall total) provide a roadmap for health care leaders and trustees to identify what to do in their work plan — and to assess their progress over time.

Most current board assessments primarily cover elements of safety, patient satisfaction, and/or board culture related to quality oversight. Most assessments do not identify the specific processes for quality oversight beyond safety and do not equally address all the dimensions of quality, including population health and care provided outside of the hospital. Variation across assessments may create confusion among trustees about what really is optimal in the oversight of quality.

The GQA aims to ensure that health system board quality oversight extends beyond the hospital to include the entire continuum of care. While many trustees understand concepts and frameworks like STEEEP and the IHI Triple Aim, they often have difficulty translating those concepts into specific activities they must perform. The GQA is specific, actionable, and tracks the processes that enable excellent quality governance. The GQA is designed for trustees and those who support them; it is written in straightforward, actionable, and trustee-centered language.

GQA Core Processes and Scoring

The Governance of Quality Assessment provides a snapshot of a total of 30 core processes organized into six categories that a board with fiduciary oversight needs to perform to properly oversee quality. The 30 core processes were developed by the expert group based on their expert opinions combined with insights gathered from more than 50 additional interviews of governance experts and health executives in the research and assessment phase of this work.

As referenced in the companion research summary to this white paper,²¹ there are limited evidence-based recommendations on core processes for governance of quality beyond a few structural recommendations such as time spent, use of a dashboard, and having a dedicated quality committee. The GQA puts forth a set of core processes for governance of quality that were collaboratively developed, evaluated, and ranked at the expert meeting.

The GQA should be utilized by health systems and results tracked over time to validate the assessment's effectiveness. Certainly, there are additional quality oversight actions a board could undertake (and many already do) beyond those identified in the GQA. However, the expert group and interviewees identified the core processes in the GQA as a starting point for calibration and improvement. With a commitment to learning and improvement, and in recognition of the dynamic nature of health care, the GQA should also be revised as appropriate to incorporate the insights from new research in the boardroom.

The GQA includes a scoring system (0, 1, or 2) for trustees and health system leaders to assess the current level of performance for the 30 core processes, the six categories, and overall. Scores are totaled so that trustees and health care leaders can establish baseline scores (for each process, category, and overall) and then track their progress over time.

Bringing the GQA to the Boardroom

Health system CEOs should complete the GQA annually with their board chair and quality committee chair(s) and/or quality committee to establish a baseline for assessing their current state of oversight of quality; to identify opportunities for improvement; and to track their GQA scores over time as a measure of improving board quality oversight. It is also useful to have the senior leaders who interface with the board complete the GQA to understand and assess their role with respect to trustee oversight of quality.

Once the respondents have completed the GQA, senior leaders and trustees may choose to focus on the lowest-scoring areas to identify improvement strategies. Within larger health systems, the GQA is a useful tool to evaluate the work of multiple quality committees and create a system-wide work plan and strategies for board oversight of quality. We recommend that boards complete the GQA annually to monitor their performance and progress.

The GQA can also be used to guide discussions about which activities should be conducted at which level of governance in the case of complex systems (e.g., which processes are or should be covered in local boards, the system quality committee, and/or the overall health system board). In addition, the assessment can be used as a tool for discussion in setting agenda items for the board or quality committees.

Finally, governance educators might also use the assessment to help design their educational sessions for board members, targeting educational content to the areas where the clients need more support or education.

The expert group also recommended that the assessment tool be utilized for future research to compare how systems are performing relative to each other, collecting data longitudinally to identify which elements of the GQA are most correlated with various components of quality performance and other metrics of culture and management known to be associated with excellence.

Governance of Quality Assessment (GQA) Tool

This assessment tool was developed to support trustees and senior leaders of health systems in their oversight of quality of care by defining the core processes, culture, and commitment for excellence in oversight of quality. A guiding principle in the development of this assessment was for the board to view their role in quality oversight comprehensively in terms of the Institute of Medicine STEEEP dimensions (care that is safe, timely, effective, efficient, equitable, and patient centered) and the IHI Triple Aim.

The Governance of Quality Assessment (GQA) tool should be used to evaluate the current level of performance for 30 core processes in six categories, to identify areas of oversight of quality that need greater attention or improvement, and to track progress over time.

Instructions

The Governance of Quality Assessment organizes the health system board's quality oversight role into six categories that include a total of 30 core processes a board with fiduciary oversight should perform to effectively oversee quality.

Health system CEOs should complete the GQA annually with their board chair and quality committee chair(s) and/or quality committee.

For each item in the assessment, the person completing the assessment should indicate a score of 0, 1, or 2. Scores are then totaled for each category and overall.

| Score | Description |
|-------|---|
| 0 | No activity: The process is not currently performed by the board, or I am unaware of our work in or commitment to this area. |
| 1 | Infrequent practice: The board currently does some work in this area, but not extensively, routinely, or frequently. |
| 2 | Board priority: The board currently does this process well — regularly and with thought and depth. |

Governance of Quality Assessment Tool (continued)

| Category 1: Prioritize Quality: Board Quality Culture and Commitment | | |
|--|-------------------------------|---|
| Core Board Process | Score (0, 1, or 2) | Process leads to a: |
| 1. Board establishes quality as a priority on the main board agenda (e.g., equivalent time spent on quality and finance), and time spent on quality reflects board commitment. | | Executive committee/governing board that spends a minimum of 20% to 25% of meeting time on quality Agenda that reflects board oversight of and commitment to quality |
| 2. Health system senior leaders provide initial and ongoing in-depth education on quality and improvement systems to all trustees and quality committee members, and clearly articulate board fiduciary responsibility for quality oversight and leadership. | | Board that understands the definition of quality, key concepts, and the system of improvement used within the organization |
| 3. Board receives materials on quality before board meetings that are appropriately summarized and in a level of detail for the board to understand the concepts and engage as thought partners. | | Board that is prepared for quality oversight and engaged in key areas for discussion |
| 4. Board reviews the annual quality and safety plan, reviews performance on quality metrics, and sets improvement aims. | | Board that takes responsibility for quality and performance on quality |
| 5. Board ties leadership performance incentives to performance on key quality dimensions. | | Board that establishes compensation incentives for senior leaders linked to prioritizing safe, high-quality care |
| 6. Board conducts rounds at the point of care or visits the health system and community to hear stories directly from patients and caregivers to incorporate the diverse perspectives of the populations served. | | Board that sets the tone throughout the organization for a culture of teamwork, respect, and transparency and demonstrates an in-person, frontline, board-level commitment to quality |
| 7. Board asks questions about gaps, trends, and priority issues related to quality and is actively engaged in discussions about quality. | | Board that engages in generative discussion about quality improvement work and resource allocation |
| Category 1 Total Score: (14 possible) | | |

Governance of Quality Assessment Tool (continued)

| Category 2: Keep Me Safe: Safe Care | | |
|---|-------------------------------|--|
| Core Board Process | Score (0, 1, or 2) | Process leads to a: |
| 1. Board regularly tracks and discusses performance over time on key safety metrics (including both in-hospital safety and safety in other settings of care). | | Board that reviews management performance on key safety metrics and holds management accountable for areas where performance needs to be improved |
| 2. Board annually reviews management's summary of the financial impact of poor quality on payments and liability costs. | | Board that understands the financial costs of poor safety performance |
| 3. Board evaluates management's summary of incident reporting trends and timeliness to ensure transparency to identify and address safety issues. | | Board that holds management accountable to support staff in sharing safety concerns to create a safe environment of care for patients and staff |
| 4. Board reviews Serious Safety Events (including workforce safety) in a timely manner, ensuring that leadership has a learning system to share the root cause findings, learning, and improvements. | | Board that holds management accountable for a timely response to harm events and learning from harm |
| 5. Board reviews management summary of their culture of safety survey or teamwork/safety climate survey to evaluate variations and understand management's improvement strategies for improving psychological safety, teamwork, and workforce engagement. | | Board that holds management accountable for building and supporting a culture of psychological safety that values willingness to speak up as essential to patient care and a collaborative workplace |
| 6. Board reviews required regulatory compliance survey results and recommendations for improvement. | | Board that performs its required national (e.g., CMS, Joint Commission, organ donation) and state regulatory compliance oversight |
| Category 2 Total Score: (12 possible) | | |

Governance of Quality Assessment Tool (continued)

| Category 3: Provide Me with the Right Care: Effective Care | | |
|---|-------------------------------|---|
| Core Board Process | Score (0, 1, or 2) | Process leads to a: |
| 1. Board ensures that the clinician credentialing process addresses concerns about behavior, performance, or volume and is calibrated across the health system. | | Board that understands its fiduciary responsibility of credentialing oversight to ensure the talent and culture to deliver effective patient care |
| 2. Board reviews trends and drivers of effective and appropriate care as defined for the different areas of the system's care. | | Board that holds leadership accountable to ensure that the system does not underuse, overuse, or misuse care |
| 3. Board evaluates senior leaders' summary of metrics to ensure physician and staff ability to care for patients (e.g., physician and staff engagement, complaint trends, staff turnover, burnout metrics, violence). | | Board that holds senior leaders accountable for the link between staff engagement and wellness with the ability to provide effective patient care |
| 4. Board establishes a measure of health care affordability and tracks this measure, in addition to patient medical debt, over time. | | Board that understands that cost is a barrier for patients, and that health systems are accountable to the community to ensure affordable care |
| Category 3 Total Score: (8 possible) | | |

Governance of Quality Assessment Tool (continued)

| Category 4: Treat Me with Respect: Equitable and Patient-Centered Care | | |
|--|-------------------------------|---|
| Core Board Process | Score (0, 1, or 2) | Process leads to a: |
| 1. Board has patient representation, patient stories, and/or interaction with patient and family councils, and engagement with community advocates at every board and quality committee meeting. | | Board that connects its quality oversight role with direct patient experiences to build understanding of issues and connection to patients |
| 2. Board reviews patient-reported complaints and trends in patient experience and loyalty that indicate areas where respectful patient care is not meeting system standards. | | Board that reviews senior leadership's approach to evaluating, prioritizing, and responding to patient concerns and values a patient's willingness to recommend future care |
| 3. Board evaluates and ensures diversity and inclusion at all levels of the organization, including the board, senior leadership, staff, providers, and vendors that support the health system. | | Board that supports and advances building a diverse and culturally respectful team to serve patients |
| 4. Board reviews the health system's approach to disclosure following occurrences of harm to patients and understands the healing, learning, and financial and reputational benefit of transparency after harm occurs. | | Board that understands the link between transparency with patients after harm occurs and a culture of learning and improvement in the health system |
| 5. Board ensures that all patient populations, especially the most vulnerable, are provided effective care by evaluating variations in care outcomes for key conditions or service lines based on race, gender, ethnicity, language, socioeconomic status/payer type, and age. | | Board that holds senior leaders accountable for health equity (making sure all patients receive the same quality of care) and prioritizes closing the gaps in outcomes that are identified as disparities in care |
| Category 4 Total Score: (10 possible) | | |

Governance of Quality Assessment Tool (continued)

| Category 5: Help Me Navigate My Care: Timely and Efficient Care | | |
|--|-------------------------------|---|
| Core Board Process | Score (0, 1, or 2) | Process leads to a: |
| 1. Board reviews metrics related to access to care at all points in the system (e.g., hospital, clinics, behavioral health, nursing home, home care, dental) and ensures that access is equitable and timely for all patients. | | Board that oversees senior leadership's strategy to improve care access (e.g., time and ability to get an appointment, wait time for test results, delays) for all patients |
| 2. Board reviews senior leadership's strategy for and measurement of patient flow, timeliness, and transitions of care, and evaluates leadership's improvement priorities. | | Board that evaluates the complexity of care navigation for patients and monitors senior leadership's work to integrate care, reduce barriers, and coordinate care (e.g., delays, patient flow issues) to support patients |
| 3. Board evaluates senior leadership's strategy for digital integration and security of patient clinical information and its accessibility and portability to support patient care. | | Board that holds senior leaders accountable for a strategy to support patients' digital access, security, and portability of clinical information |
| Category 5 Total Score: (6 possible) | | |

Governance of Quality Assessment Tool (continued)

| Category 6: Help Me Stay Well: Community and Population Health and Wellness | | |
|---|-------------------------------|--|
| Core Board Process | Score (0, 1, or 2) | Process leads to a: |
| 1. Board reviews community health needs assessment and senior leadership's plans for community and population health improvement. | | Board that oversees the development of a community health needs assessment and has identified which population health metrics are most relevant to track for its patients (e.g., asthma, diabetes, stroke, cancer screening, flu vaccine, dental, prenatal, opioid overuse, obesity, depression screening) Board holds senior leaders accountable for reaching goals established to improve key community health issues |
| 2. Board reviews performance in risk-based contracts for population health. | | Board that evaluates performance on risk-based contracts for populations and strategies for improvement |
| 3. Board evaluates approach to integration and continuity of care for behavioral health patients. | | Board that holds senior leaders accountable for integrating care and tracking care coordination data to support screening, access, and follow-up |
| 4. Board reviews leadership's plans to address social determinants of health, including any plans for integration with social and community services. | | Board that understands the essential nature of wraparound services to support the wellness of certain patient populations and oversees the strategic integration with those service providers |
| 5. Board evaluates the health system's strategy for supporting patients with medically and socially complex needs and with advance care planning. | | Board that ensures senior leaders evaluate high-utilization groups and key drivers to help those users navigate and manage their care |
| Category 6 Total Score: (10 possible) | | |

| | |
|---|-----------|
| Total Score for This Assessment: (sum of total scores for Categories 1 through 6) | |
| Total Possible Score: | 60 |

Interpreting the Overall Governance of Quality Assessment Score

| Total Score | Board Performance Level |
|--------------------|--|
| 40 to 60 | Advanced board commitment to quality |
| 25 to 40 | Standard board commitment to quality |
| 25 or Fewer | Developing board commitment to quality |

Using GQA Results to Plan Next Steps

After completing the Governance of Quality Assessment, the CEO, board chair, and board quality chair(s) should review the results and use them as the basis for planning next steps.

- **Review the spectrum of GQA scores:** Are the results similar across your board and committees? Compare the variation of scores across your board, quality committee(s), and senior leaders. If there is high variation in scores, it may be an opportunity to consider clarifying expectations and the work plan for quality oversight.
- **Aggregate GQA scores to identify areas for improvement:** Aggregating the GQA scores (overall and for each category) establishes a baseline score to evaluate the current areas of oversight and identify opportunities to better oversee the dimensions of quality that have lower scores. Could the board agenda or work plan be adjusted to make time to address other quality items (i.e., those with low GQA scores)?
- **Set a target GQA score for next year:** Set a target and a plan for improving the GQA score annually. Focus on the elements of the GQA where you have the greatest gap or that are of the most strategic importance to your organization.

We recommend that boards and leadership teams also evaluate time spent discussing quality and trustee confidence in their knowledge of basic quality concepts in tandem with the GQA.

- **Evaluate time allocation to quality:** Track how much time the board spends each meeting discussing quality. Does the time commitment indicate that quality has equal priority in time and attention with finance? Is quality just an item on the agenda without discussion?
- **Use the GQA to identify board education opportunities:** Review both the initial education and the ongoing education of board members on quality. What topics in the framework and GQA are not covered? Do you provide trustees with supplementary reading, useful articles, and educational opportunities in the areas identified in the GQA?

Conclusion

Excellence in quality must be supported from the bedside to the boardroom; patients deserve nothing less. Health system boards are deeply committed to the patients and communities they serve; however, trustees often require support in order to best understand and fulfill their fiduciary responsibility and commitment to the patients and communities they serve. Trustee knowledge of quality and improvement concepts is essential to their governance role. To be effective, trustees must also pair this knowledge with an effective board culture and a clear set of activities that support oversight of quality.

The framework, assessment tool, and support guides presented in this white paper were created through collaboration with leaders in health care and governance. The immediate goal of these resources is to reduce variation in board oversight of quality and to provide an improved roadmap for health system trustees. The ultimate goal is to ensure that oversight of quality of care for all patients is supported by more effective board education in quality concepts, clarity of core processes for trustee governance of quality, and a deeper board commitment to quality.

Appendix A: Support Guides

The expert group identified three core knowledge areas for effective governance of quality: first, a familiarity with all dimensions of quality; second, an understanding of how improvement occurs in systems; and third, an appreciation of the importance of demonstrating a commitment to quality through the board culture.

Appendix A includes support guides for these three core knowledge areas:

- [Support Guide: Core Quality Knowledge](#)
- [Support Guide: Core Improvement System Knowledge](#)
- [Support Guide: Board Culture and Commitment to Quality](#)

Support Guide: Core Quality Knowledge

The medical terms, health care oversight organizations and processes, and clinical concepts that arise in quality work are often unfamiliar to board members without a medical background, unlike other areas of oversight such as finance. Initial and ongoing education in quality concepts is essential to providing trustees with the necessary context and knowledge for thoughtful engagement.

This support guide is designed to guide hospital leaders and trustee educators in taking the guesswork out of the core quality concepts that are needed to prepare trustees for governance of quality across *all* dimensions and *all* care settings.

The expert group recommended providing governance education to trustees via a simple, patient-centered framework, just as the Governance of Quality Assessment consolidates and clarifies core board processes for governance of quality from the STEEEP dimensions of quality into a patient-centered framework. See Figure 3 (above), which presents the patient at the center of governance quality work, a visual that the expert group found compelling.

All new trustees, not just quality committee members, need to receive a thorough introduction to quality. To oversee quality, board members need fluency in many concepts, which should be introduced in a layered manner (similar to building a scaffold) to avoid overwhelming trustees. An overarching framework that shows how all these elements are necessary for patient care helps connect the dots and build commitment.

Table 1 presents the foundational concepts for board oversight of quality recommended by the expert group, organized by the STEEEP dimensions of quality (care that is safe, timely, effective, efficient, equitable, and patient centered) represented through a patient lens.

Table 1. Foundational Concepts for Board Core Quality Knowledge

| Quality Concept | Key Questions | Suggested Educational Concepts |
|------------------------------------|--|---|
| Basic Quality Overview | <ul style="list-style-type: none"> • What is quality in health care? • What are the benefits of quality? • What are the costs of poor quality? • Who oversees the elements of quality in our organization? | <ul style="list-style-type: none"> • Brief overview of quality in health care • STEEEP dimensions of quality presented through a patient lens • IHI Triple Aim • Benefits of quality • “Cost” of poor quality: Financial, patients, staff • Quality strategy, quality management • Overview of risk-/value-based care • Structures for quality reporting, assessment, and improvement • Structure for CEO/leadership evaluation |
| Keep Me Safe <i>Safe</i> | <ul style="list-style-type: none"> • What is safety? • What is a culture of safety? • What are surveys of patient safety culture? • What is “harm”? • What are the types of harm? • How do you decide if an adverse outcome is preventable harm? • How do we learn about harm in a timely manner? • What is our response to harm (i.e., what actions do we take when harm occurs)? • What are the financial and reputational costs of harm? • How do we reduce, learn from, and prevent harm? • How do we track harm in our system and in the industry? | <ul style="list-style-type: none"> • Preventable harm vs. adverse outcome • Just Culture and culture of safety • Science of error prevention and high reliability • Classification of the types of harm • Knowing about harm: Incident reporting, claims, grievances • Response to harm: Root cause analysis/adverse event review, patient apology and disclosure, legal, learning systems • Costs of harm: Claims/lawsuits, penalties, ratings, reputational, human emotional impact • Harm terminology: HAC, SSI, falls, ADE, employee safety, etc. • Regulatory oversight of safety |

| Quality Concept | Key Questions | Suggested Educational Concepts |
|---|--|--|
| Provide Me with the Right Care <i>Effective</i> | <ul style="list-style-type: none"> How do we ensure that our health system properly diagnoses and cares for patients to the best evidence-based standards in medicine? How does leadership oversee whether approaches to care vary within our system? How do we identify the areas where care is not to our standards? How do we identify the areas where care is meeting or exceeding our standards? How do we attract and retain talent to care for patients? | <ul style="list-style-type: none"> Evidence-based medicine Overview of staff and physician recruitment, credentials/privileges, training, retention (burnout, turnover, violence) Overview of standard of care concept and issues/processes that lead to variation Trends in care utilization and clinical outcomes Key care outcomes to be evaluated through an equity lens: race, ethnicity, gender, language, and socioeconomic status |
| Treat Me with Respect <i>Equitable and Patient centered</i> | <ul style="list-style-type: none"> How do we evaluate patients' satisfaction and feedback? What is "equitable care" and how do we evaluate it? Do some patient groups have worse outcomes? Why? What is our staff diversity and how may it impact patient care? How do we ensure that patients are partners in their care? How do we reduce cost of care? How do we track medical debt for patient groups? | <ul style="list-style-type: none"> Patient satisfaction and patient grievances (e.g., HCAHPS²²) Patient-centered care Care affordability, debt burden Social determinants of health Pricing and affordability of care bundles Total costs of care for conditions Medical debt concerns/trends Value-based payment models |
| Help Me Navigate My Care <i>Timely and Efficient</i> | <ul style="list-style-type: none"> What do care navigation and care access mean? What issues result from waiting for care or disconnected care (care that is not timely or efficient)? Which populations have more complex care needs? What do we do to help them navigate care? What is the role of a portable medical record and health IT in supporting care navigation? | <ul style="list-style-type: none"> Care access, efficiency, and drivers of care navigation Define "continuum of care" Focus on key areas that are "roadblocks" in care navigation and their drivers Define electronic health record, health IT, and the systems to support and secure patient information and patient access |

| Quality Concept | Key Questions | Suggested Educational Concepts |
|---|--|---|
| Help Me Stay Well <i>Community and Population Health and Wellness</i> | <ul style="list-style-type: none"> • What is the difference between population and patient health? • How do we segment patient populations to evaluate population health outcomes? • What unique strategies do/can we deploy to care for and engage areas or populations with worse health outcomes? • How are we compensated (or not) for population health and wellness? | <ul style="list-style-type: none"> • Define population health vs. patient health²³ • Explain the community health needs assessment (CHNA) • Interpret population health, prevention, and wellness metrics • Define social determinants of health • Explain fee-based vs. risk-based contracts |

This support guide can be used as a starting point for hospital leaders and educators to create their system's board education plan, to ensure the concepts are imparted across the dimensions of health care quality to trustees. Health systems will vary in terms of which concepts need to be introduced to all trustees versus only to those who serve on the quality committee. That said, absorbing all these concepts at once would be overwhelming, so teaching the concepts in smaller segments over time is essential, as is reinforcing the concepts with additional learning opportunities and available resources, particularly as new members join the board.

It is also worthwhile to consider different formats for teaching these concepts to various audiences such as a half-day retreat, a full-day education session, or in-depth hour-long programs offered throughout the year. Finally, consider how the concepts should be introduced to new trustees and reinforced for experienced trustees to support a common knowledge base.

Just as most trustees join a board with a conversation about what they can contribute in time, treasure, and talent to support the organization, perhaps there can also be a "learn" expectation to identify the need for continuous growth and learning, even as a trustee, to advance a culture of improvement and quality excellence.

Support Guide: Core Improvement System Knowledge

A 2016 IHI White Paper, *Sustaining Improvement*, identified the drivers of quality control and quality improvement in high-performing organizations and highlighted that boards play an essential role in creating a culture of quality care and quality improvement.²⁴ Quality knowledge for trustees must include a deep understanding of and comfort with how health system leaders will identify, assess, and improve the elements of care delivery.

Organizations might take many approaches to improvement — from Total Quality Management, to Lean, to high reliability, to the Model for Improvement. Trustees need to understand their health system's improvement methodology and ensure that the health system has the people, processes, and infrastructure to support its improvement efforts.

Trustees might ask health system leaders the following discussion questions to gain an understanding of the organization's improvement system:

- What is the organization's system of improvement, in terms of both evaluating performance and prioritizing areas for improvement?
- How were major quality improvement efforts selected in the last two years? What criteria were used and evaluated to measure their impact?
- How does quality improvement cover the entire health system versus in-hospital improvement only?
- What analytic methods do leaders use to gather insight from the entire system to inform improvement initiatives? What are the gaps in the information and analytics?
- Recognizing that quality improvement is most sustainable when frontline staff members are engaged, how do senior leaders ensure that frontline staff lead quality improvement work, are actively providing ideas for improvement, and are willing and encouraged to speak up?

Health care leaders may educate board members on their organization's improvement system in many ways. For example:

- Virginia Mason Health System board members travel to Japan to learn about the Toyota Production System and Lean principles that Virginia Mason also employs.²⁵
- The pediatric improvement network called Solutions for Patient Safety dedicates significant effort to board education on their high-reliability method of improvement and the board's role in understanding the core knowledge of safety and analyzing performance.²⁶
- The board at St. Mary's General Hospital in Kitchener, Ontario, "sought out new knowledge about Lean through board education sessions, recruited new members with expertise in Lean and sent more than half of the board to external site visits to observe a high-performing Lean healthcare organization."²⁷

Boards must understand how health system leaders perform the functions of quality planning, quality control, and quality improvement throughout the organization — and how that quality work is prioritized and resources are allocated. A 2015 article describes the process that Johns Hopkins Medicine undertook to ensure that the health system could map accountability for quality improvement throughout the organization, from the point of care to the board quality committee.²⁸ Similarly, in an article for The Governance Institute's *BoardRoom Press*, leaders from Main Line

Health shared their effort to delineate the flow and tasks of the oversight of quality from the boardroom to the frontline operations.²⁹ While the Johns Hopkins and Main Line Health approaches are unique to their systems, the essential idea they advanced is that a board and leadership should define the components of quality improvement work in their system and identify the accountability for those components throughout the system.

In addition to understanding accountability for quality throughout a health system, it is also essential for trustees to develop analytical skills to review data and engage meaningfully with leadership in generative dialogue about trends in the data. As part of their quality oversight role, health system boards need to understand the organization's key metrics and periodically review areas of performance that are outside of or below established expectations.

Also, educational training for trustees should teach them how to review data over time and request that data be benchmarked against other leading organizations to help them evaluate improvement opportunities. In IHI's interviews, some trustees noted that the way data are presented often impacts their ability to gain insights to oversee and engage leaders in discussions on quality performance and progress of quality improvement efforts.

In her work with health system trustees, Maureen Bisognano, IHI President Emerita and Senior Fellow, challenges boards that they should be able to answer four analytic questions pertaining to quality:³⁰

1. Do you know how good you are as an organization?
2. Do you know where your variation exists?
3. Do you know where you stand relative to the best?
4. Do you know your rate of improvement over time?

A board that understands management's system of improvement and is analytically capable of tracking performance will be able to confidently answer those four questions. The board plays a critical role in holding health system leaders accountable for improvement results and should be a thought partner in the system's quality improvement efforts. Understanding the system of improvement and the ways in which an organization identifies and prioritizes areas for improvement is an essential function of quality governance.

Support Guide: Board Culture and Commitment to Quality

A board that understands quality concepts and the organization's system of improvement may still be unable to fulfill its commitment to safe, high-quality, and equitable patient care if it does not also have a culture of commitment to quality and a structure that ensures that the quality functions are effectively carried out. Essential elements of board culture and commitment to quality are incorporated in the Governance of Quality Assessment in recognition that a board that governs quality must not only know the key processes to oversee quality, but also oversee them in a way that demonstrates a cultural commitment to quality.

Many individuals and organizations have contributed thought leadership on building a culture for governance of quality in health care, including leading governance experts (such as Jim Conway, James Reinertsen, Larry Prybil, and James Orlikoff), The Governance Institute, the American Hospital Association, and a few leading state hospital associations. With guidance from the expert group, this support guide focuses on elements of governance culture, structure, and commitment that are unique to supporting trustee oversight of and engagement in quality.

The expert group identified five high-level attributes of board culture and commitment to quality, as described below.

Set Expectations and Prioritize Quality

Quality needs to be a priority for all board members, not completely delegated to the quality committee(s), even if the quality committee is doing more of the oversight. Quality is demonstrated as a board priority in many ways, including dedicating time to engage in discussion about quality issues on board meeting agendas, and linking some component of executive compensation to performance on quality metrics.

For example, before a trustee joins the Virginia Mason Health System board, they are sent a compact (that is then reviewed annually) to reinforce core expectations of trustees, which includes quality oversight.³¹ Stephen Muething, Co-Director, James M. Anderson Center for Health System Excellence, Cincinnati Children's Hospital Medical Center, notes that Cincinnati Children's initially assigns all new board members to serve on the quality committee for their first year on the board, indicating that quality is so essential to their operations that every board member must develop core knowledge in quality.

Still, for too many boards, quality is not central to trustee education and not allocated sufficient time for learning and generative discussion.

Build Knowledge Competency and Define Oversight Responsibility of Quality

Knowledge and a clear work plan form a foundation for confident and thoughtful engagement in quality. Once trustees have been educated and are confident in their understanding of the core concepts, health system leaders need to work with trustees to define which issues the quality committee(s) will manage and which issues will be discussed by the entire board. This delineation of activities needs to be clearly articulated in the annual work plan for each group and will vary based on the size, scope, and structure of each organization.

Create a Culture of Inquiry

Board oversight of quality is not intended to micromanage the work of senior leaders, but to engage in thoughtful inquiry to ensure that organizational performance aligns with the expectations established by both leaders and trustees. For example, Henry Ford Health System has an annual quality retreat for its board quality committee and the quality committees of its hospitals and business lines. The trustees and health system leaders use this retreat as a time to dive deep on education, evaluate performance in depth, and have small group discussions to evaluate both quality and governance practices.³²

Diversity also adds to the culture of inquiry by bringing differing perspectives and community representation to the quality discussions. The size of board and committee meetings can prohibit in-depth dialogue; building in time for small group interactions can help support a culture of inquiry.

Be Visible in Supporting Quality

Boards can support health system leaders in their efforts to improve quality in many ways, including conducting rounds, visiting the point of care, and thanking frontline staff for their contributions to improving care quality and safety. Health system leaders can provide guidance on the best ways for trustees to be visible in supporting quality in the organization.

Focus on the Patient

The board can also support quality work by including time on the agenda to hear patient stories, which personalizes the data. For example, board chair Mike Williams described how “Children’s National Medical Center in Washington, DC, has strengthened board engagement with their frontline clinical teams to focus on safety, quality, and outcomes of clinical care. Their ‘board to bedside’ sessions discuss important topics of care and then move to the bedside to experience how changes are being implemented and gather experiences of patients.”³³

The elements of this support guide are reinforced in the Board Quality Culture and Commitment section (Category 1) of the Governance of Quality Assessment (GQA). Boards that carry out the core processes of governance of quality without a deeper culture and commitment to quality will be more likely to have a “check the box” mentality that the expert group identified as less likely to demonstrate leadership and commitment to advancing quality within the health system in a way that patients deserve.

Appendix B: IHI Lucian Leape Institute Expert Meeting Attendees

Advancing Trustee Engagement and Education in Quality, Safety, and Equity

July 12, 2018

- Paul Anderson, Trustee, University of Chicago Medical Center
- Evan Benjamin, MD, MS, FACP, Chief Medical Officer, Ariadne Labs; Harvard School of Public Health; Harvard Medical School; IHI Faculty
- Jay Bhatt, DO, Senior Vice President and Chief Medical Officer, American Hospital Association; President, Health Research & Educational Trust
- Lee Carter, Member, Board of Trustees, Former Board Chair, Cincinnati Children's Hospital Medical Center
- Jim Conway, MS, Trustee, Winchester Hospital, Lahey Health System
- Tania Daniels, PT, MBA, Vice President, Quality and Patient Safety, Minnesota Hospital Association
- James A. Diegel, FACHE, Chief Executive Officer, Howard University Hospital
- James Eppel, Executive Vice President and Chief Administrative Officer, HealthPartners
- Karen Frush, MD, CPPS, Chief Quality Officer, Stanford Health Care
- Tejal K. Gandhi, MD, MPH, CPPS, Chief Clinical and Safety Officer, Institute for Healthcare Improvement; President, IHI Lucian Leape Institute (Meeting Co-Chair)
- Michael Gutzeit, MD, Chief Medical Officer, Children's Hospital of Wisconsin
- Gerald B. Hickson, MD, Senior Vice President for Quality, Safety, and Risk Prevention, Vanderbilt Health System; Joseph C. Ross Chair for Medical Education and Administration, Vanderbilt University Medical School; Board Member, Institute for Healthcare Improvement
- Brent James, MD, MStat, Member, National Academy of Medicine; Senior Fellow and Board Member, Institute for Healthcare Improvement
- Maulik Joshi, DrPH, Chief Operating Officer, Executive Vice President, Integrated Care, Anne Arundel Medical Center
- Gary S. Kaplan, MD, FACMPE, Chairman and CEO, Virginia Mason Health System; Chair, IHI Lucian Leape Institute; Board Member, Institute for Healthcare Improvement
- John J. Lynch III, FACHE, President and CEO, Main Line Health
- Kedar Mate, MD, Chief Innovation and Education Officer, Institute for Healthcare Improvement
- Patricia McGaffigan, RN, MS, CPPS, Vice President, Safety Programs, Institute for Healthcare Improvement; President, Certification Board for Professionals in Patient Safety, IHI
- Ruth Mickelsen, JD, MPH, Board Chair, HealthPartners

- Stephen E. Muething, MD, Chief Quality Officer, Co-Director, James M. Anderson Center for Health System Excellence, Cincinnati Children's Hospital Medical Center
- Lawrence Prybil, PhD, LFACHE, Community Professor, College of Public Health, University of Kentucky
- Michael Pugh, MPH, President, MDP Associates; Faculty, Institute for Healthcare Improvement
- Shahab Saeed, PE, Adjunct Professor of Management, Gore School of Business, Westminster College; Former Trustee, Intermountain Healthcare
- Carolyn F. Scanlan, Board Member, Penn Medicine Lancaster General Health
- Michelle B. Schreiber, MD, former Senior Vice President and Chief Quality Officer, Henry Ford Health System
- Andrew Shin, JD, MPH, Chief Operating Officer, Health Research & Educational Trust
- Debra Stock, Vice President, Trustee Services, American Hospital Association
- Charles D. Stokes, MHA, FACHE, President and CEO, Memorial Hermann Health System; Immediate Past Chair, American College of Healthcare Executives
- Beth Daley Ullem, MBA, Lead Author and Faculty, IHI; President, Quality and Patient Safety First; Trustee, Solutions for Patient Safety and Catalysis; Former Trustee, Thedacare and Children's Hospital of Wisconsin; Advisory Board, Medstar Institute for Quality and Safety
- Sam R. Watson, MSA, MT(ASCP), CPPS, Senior Vice President, Patient Safety and Quality, and Executive Director, MHA Keystone Center for Patient Safety and Quality, Michigan Health & Hospital Association; Board Member, Institute for Healthcare Improvement
- John W. Whittington, MD, Senior Fellow, Institute for Healthcare Improvement
- Kevin B. Weiss, MD, MPH, Senior Vice President, Institutional Accreditation, Accreditation Council for Graduate Medical Education
- David M. Williams, PhD, Senior Lead, Improvement Science and Methods, Institute for Healthcare Improvement
- Isis Zambrana, Associate Vice President, Chief Quality Officer, Jackson Health System

Appendix C: Members of the IHI Lucian Leape Institute

- Gary S. Kaplan, MD, FACMPE, Chairman and CEO, Virginia Mason Health System; Chair, IHI Lucian Leape Institute; Board Member, Institute for Healthcare Improvement
- Tejal K. Gandhi, MD, MPH, CPPS, Chief Clinical and Safety Officer, Institute for Healthcare Improvement; President, IHI Lucian Leape Institute
- Donald M. Berwick, MD, MPP, President Emeritus and Senior Fellow, Institute for Healthcare Improvement
- Joanne Disch, PhD, RN, FAAN, Professor ad Honorem, University of Minnesota School of Nursing
- Susan Edgman-Levitan, PA, Executive Director, John D. Stoeckle Center for Primary Care Innovation, Massachusetts General Hospital
- Gregg S. Meyer, MD, MSc, CPPS, Chief Clinical Officer, Partners HealthCare
- David Michaels, PhD, MPH, Professor, Department of Environmental and Occupational Health, Milken Institute School of Public Health, George Washington University
- Julianne M. Morath, RN, MS, President and CEO, Hospital Quality Institute of California
- Susan Sheridan, MIM, MBA, DHL, Director of Patient Engagement, Society to Improve Diagnosis in Medicine
- Charles Vincent, PhD, MPhil, Professor of Psychology, University of Oxford; Emeritus Professor of Clinical Safety Research, Imperial College, London
- Robert M. Wachter, MD, Professor and Chair, Department of Medicine, Holly Smith Distinguished Professor in Science and Medicine, Marc and Lynne Benioff Endowed Chair, University of California, San Francisco

Emeritus Members

- Carolyn M. Clancy, MD, Assistant Deputy Under Secretary for Health for Quality, Safety and Value, Veterans Health Administration, US Department of Veterans Affairs
- Amy C. Edmondson, PhD, AM, Novartis Professor of Leadership and Management, Harvard Business School
- Lucian L. Leape, MD, Adjunct Professor of Health Policy, Harvard School of Public Health
- Paul O'Neill, 72nd Secretary of the US Treasury

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³¹ Remarks from Gary Kaplan, MD, Chairman and CEO, Virginia Mason Health System, at the expert meeting on July 12, 2018.

³² Interview with Michelle Schreiber, MD, former Senior Vice President and Chief Quality Officer, Henry Ford Health System, on January 25, 2018.

³³ Interview with Michael Williams, MBA, Board Chair, Children's National Medical Center, on February 8, 2018.